

REMARKS

This substitute amendment is being submitted to replace the amendment filed December 6, 2008 which was incorrectly dated as "December 5, 2008."

This application has been carefully reviewed in light of the Office Action dated October 7, 2008. Claims 2 to 4, 7, 8, 10 to 12, 14 to 16, 18, 19, 21 to 23 and 86 to 91 are pending in the application. Of the claims currently under consideration, Claims 2 to 4, 11, 14 to 16, 22 and 88 to 91 are independent. Reconsideration and further examination are respectfully requested.

Initially, Applicant thanks the Examiner for the indication that Claims 2, 3, 14 and 15 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1 to 5, 8, 10, 11, 13 to 17, 19, 21 and 22 were rejected under 35 U.S.C. § 103(a) over "The JPEG 2000 Still Image Coding System: An Overview" (Christopholos) in view of U.S. Published Appln. No. 2002/0176629 (Labelle).

Reconsideration and withdrawal of this rejection are respectfully requested.

Claims 2, 3, 8, 10, 11, 14, 15, 19, 21, 22 and 88.

Independent Claims 2, 3, 11, 14, 15 and 22 have been amended in accordance with the Examiner's indication of allowable subject matter. In addition, Claims 8 and 10 have been amended so that they depend from Claim 2 and Claims 19 and 21 have been amended so that they now depend from Claim 14. Finally, newly added Claim 88 is directed to an apparatus substantially in accordance with the method of Claim 3.

Accordingly, Applicant submits that Claims 2, 3, 8, 10, 11, 14, 15, 19, 21, and 88 are now in condition for allowance and respectfully requests same.

Claims 4, 16, 89 and 91

Amended independent Claim 4 is directed to a decoding method of decoding encoded image data which has been hierarchically encoded in advance by a discrete wavelet transform method. The method comprises determining a size of an image to be outputted; judging a minimum number of layer/layers of hierarchy needed to obtain a decoded image of size equal to or exceed the determined size; determining whether the minimum number of layer/layers of hierarchy corresponds to all the layers of hierarchy of the encoded image data; decoding, if the determination proves true, all the layers of hierarchy of the encoded image data, and otherwise decoding the encoded image data up to a layer of hierarchy which is one or more layers higher than the minimum number of layer/layers of hierarchy; and reducing the size of the decoded image to the determined size. Decoding includes, decoding a lowest layer of hierarchy of encoded image data among layer/layers which has/have not been decoded, comparing a size of an image obtained by decoding the encoded image data and the determined size, and repeating the decoding of a lowest layer of hierarchy of the encoded image data among the layer/layers which has/have not been decoded when the size of the decoded image is smaller than the determined size, and decoding a next lowest layer of hierarchy of the encoded image data when the size of the decoded image becomes not smaller than the determined size for a first time.

Claim 89 is directed to an apparatus substantially in accordance with Claim 4. Claims 16 and 91 are directed to an encoding method and apparatus, respectively, substantially in accordance with the decoding method of Claim 4.

Applicant submits that Christopholos and Labelle, whether considered alone or in combination, fail to disclose or suggest all of the features of Claim 4. Specifically, Christopholos and Labelle, whether taken alone or in combination, fail to disclose or suggest decoding a lowest layer of hierarchy of encoded image data among layer/layers which has/have not been decoded, comparing a size of an image obtained by decoding the encoded image data and the determined size, and repeating the decoding of a lowest layer of hierarchy of the encoded image data among the layer/layers which has/have not been decoded when the size of the decoded image is smaller than the determined size; and decoding a next lowest layer of hierarchy of the encoded image data when the size of the decoded image becomes not smaller than the determined size for a first time. In a system having this feature aliasing that occurs as a result of hierarchical coding can be reduced by decoding/encoding image data of one more layer of hierarchy and, in decoding, reducing the size of a decoded image to the determined size.

In contrast, Christopholos merely discloses sequentially decoding the hierarchically encoded data, and does not address any problems created by aliasing occurring in an image when the image is decoded to the middle of the hierarchy rather than completely. As Christopholos fails to contemplate such a problem, it cannot be said that Christopholos discloses or suggests any countermeasure to the aliasing, much less the technique featured in Claim 4, namely decoding a lowest layer of hierarchy of encoded image data among layer/layers which has/have not been decoded, comparing a size of an

image obtained by decoding the encoded image data and the determined size, and repeating the decoding of a lowest layer of hierarchy of the encoded image data among the layer/layers which has/have not been decoded when the size of the decoded image is smaller than the determined size; and decoding a next lowest layer of hierarchy of the encoded image data when the size of the decoded image becomes not smaller than the determined size for a first time.

Furthermore, Labelle discloses determining whether the minimum number of layer/layers of hierarchy corresponds/correspond to all the layers of hierarchy of the encoded image data, and decoding, if the determination proves true, all the layers of hierarchy of the encoded image data. However, Labelle is also silent regarding the feature of decoding a lowest layer of hierarchy of encoded image data among layer/layers which has/have not been decoded, comparing a size of an image obtained by decoding the encoded image data and the determined size, and repeating the decoding of a lowest layer of hierarchy of the encoded image data among the layer/layers which has/have not been decoded when the size of the decoded image is smaller than the determined size; and decoding a next lowest layer of hierarchy of the encoded image data when the size of the decoded image becomes not smaller than the determined size for a first time. Therefore, even if Christopholos were combined with Labelle, which Applicant does not concede is proper, such a combination would not include the features of the decoding/encoding methods of Claims 4 and 16.

In light of the deficiencies of Christopholos and Labelle as discussed above, Applicant submits that Claims 4, 16, 89 and 91 are now in condition for allowance and respectfully requests same.

The other pending claims in this application are each dependent from the independent claims discussed above and are therefore believed allowable for at least the same reasons. Because each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of each dependent claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

CONCLUSION

While no additional claim fees are believed to be due, the Director is further authorized to charge any deficiency or credit any overpayment to Deposit Account No. 06-1205.

Applicant's undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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